THE VETERINARY RECORD

A Weekly Journal for the Profession.

No. 1010. NOVEMBER 16, 1907. Vol. XX

Dr. A. Theiler, C.M.G.

The recently published list of "Birthday Honours" is by no means a long one, but it contains one name the inclusion of which is noteworthy. Dr. A. Theiler, the Government Veterinary Bacteriologist of the Transvaal, has been invested with the Order of C.M.G., and veterinary surgeons, both at home and abroad, will agree that the honour has been thoroughly well deserved.

Dr. Theiler has spent many years in South Africa, and done much good work. In the first place, as an official engaged in the control of disease amongst animals, he has been an invaluable public servant to a country which is largely an agricultural one. In addition to this, he has long been well known in connection with original research, and there are many diseases regarding which his observations have proved valuable to the profession. Probably the first of these services has been the one chiefly instrumental in obtaining him his present distinction, but veterinary surgeons will remember the second also, and welcome the honour which has fallen to one whom they all recognise as an able investigator in their own science.

Phlebotomy—A Suggestion.

There are old methods of treatment which the modern practitioner might find worthy of study. Phlebotomy is one of these.

We all know how universal the practice once was in both human and veterinary medicine, and how it has now long fallen into almost complete disuse. We know, at the same time, that it still retains a place in text-books as a physiological method of treating disease, and that some high authorities, at least, are inclined to think that it is now unduly neglected by practitioners. Most of us are willing to admit in general terms that phlebotomy was "killed by abuse," and that there are cases in which it might still be employed with advantage. But it must be confessed that very few of us ever attempt to practise it, or, if we do, we say little of the results attained. Very few records of cases in which phlebotomy has been resorted to have appeared for many years.

When we consider the amount of harm that was once done by indiscriminate bleeding, we can scarcely be surprised that even its occasional adoption should be regarded with disfavour. Yet it is possible that the reaction against bleeding has been carried too far, and that when its dangers were recognised, its advantages were lost sight of. Many physiologists and pathologists advocate it in certain cases, and physiologists and pathologists are very often right. But the value of the advice which emanates from laboratories must be tested by the experience of clinicians, and modern clinical evidence regarding the utility or otherwise of bleeding is scanty in the extreme.

A really valuable paper might be written by any practitioner who has made a serious and extensive trial of phlebotomy for the cases in which it is indicated. Such a paper would be very interesting—for present day clinicians have had very little practical experience, and it might help to answer the question, at present an uncertain one, whether phlebotomy deserves a more important place in modern medicine than it has occupied for many years past. We all recognise the dangers of the practice, but not many of us ever attempt to ascertain its possible benefits in well-chosen cases. There is not the least fear that we shall ever return to the old days of universal blood-letting. On the other hand, there is just a possibility that we may find we have been unduly prejudiced against a powerful therapeutic agent because it was misused by our fathers.

DOSE OF NUX VOMICA AND STRYCHNINE FOR DOG.

By Henry Gray, M.R.C.V.S.

I agree with Mr. E. W. Hoare's remarks in your last issue. In text books and journals one finds very loose statements given as to the dosage of nux vomica and strychnine for the dog and cat. This is very unfortunate for the student, beginner, and even older practitioners, who have, to my knowledge, in many instances either had to pay for the loss of a dog or lost a client, who has acted ever after as an honorary advertising agent of his ability as a dog killer.

After a good many years experience with dogs from 2 to 100 or more lbs. in weight I find 1-2000 to 1-1000 gr. of strychnine to be the *medicinal* dose for every pound the dog weighs. The smaller dose should be commenced with, and care should be taken that the doses are properly interspaced and given regularly, preferably immediately after food. One may give strychnine safely for several days under precautions before one gets an accumulative toxic action, just as one may with digitalis, arsenic, toxins, etc.

The *physiological* dose is never required unless in cases of paraplegia, advanced chorea, amaurosis, etc.

I never reckon a dog to be in a dangerous state as long as he can maintain the standing position; the dangerous stage is when he must from necessity assume the lateral recumbent position.

If inexperienced practitioners were to adopt my advice, based on long experience, they would never give strychnine or nux vomica, or any compound containing them, unless they wanted to run the risk of killing a dog or cat, or perhaps upset the owner so much that the next time a V.S. was required one would be sent for who didn't give such dangerous drugs. They are not necessary for a cure of a curable case; and certainly they are useless in an incurable one. I believe they very often add fuel to fire in structural nervous disorders such as myelitis or neuritis evidenced by paralysis, spasm or convulsions. If a case will get well without strychnine or nux vomica why give them? because it is a fashion to do so or because they are recommended by authority, who frequently assumes too much from imagination?

There seems to be a lot of nonsense written about the toxic effects on the animal before and after death. I have read that a dog may rush about howling, frothing at the mouth and champing the jaws in strychnine poisoning, and that after death a large amount of strychnine was found in the stomach. I cannot believe such phenomena take place with such a cause. To me it seems an idea originating from the inner workings of a disordered mind.

As to the so-called classical post-mortem appearances, one only finds them in text-books not always written from first hand knowledge. Frequently I have found neither rigidity nor *rigor mortis*, retraction of the angles of the mouth or the ears. The so-called classical signs of strychnine poisoning are mostly a myth, not to be relied on unless the alkaloid is found on analysis of the contents of stomach by a competent and *reliable* chemist.

I shall be glad at some future date to go into this question, as I have, stowed away, notes of many post-mortem cases that were on analysis by a careful chemist proved to be those of strychnine poisoning.

The only treatment I have found reliable in acute cases is chloroform narcosis in conjunction with a hypodermic injection of apomorphine hydrochloride. I brought this method before the notice of the profession through the medium of *The Veterinary Record* fourteen or fifteen years ago.

A CASE OF DILATED VAGINA.

JOACHIM D'COSTA, G.B.V.C., Khairpur Mirs.

A chestnut country-bred mare, about 14 years old, was brought to me about a fortnight ago with the complaint that she was frequently passing wind from the vagina, thereby making a loud noise, and also passing a large amount of matter from the same.

The case struck me to be one of recto-vaginal fistula, and I thought her past history and further questions would serve to confirm my off-hand diagnosis. But the groom, who had brought the animal, appeared to have been recently appointed and knew nothing of the duration, cause etc. of the disease, nor could he enlighten me on any of the questions I asked him. However, on enquiring from the owner later on I found that the complaint was of nearly five years standing and had followed a rather difficult parturition. The owner had tried his own treatment, and not satisfied with this had subjected her to the treatment of a good number of quacks, but all to no effect. At last he sent the case to me and requested me to treat her to the best of my ability.

I examined the rectum of the animal but could find no rent nor the slightest opening in the same. To make sure I threw up some lukewarm water by means of an enema, but only to find that the water returned completely from the anus and not a drop from the vulva. I next examined the vagina. The introduction of my hand was abnormally easy, as there was hardly any resistance from the parts, and on pushing my hand still further I felt a peculiar sensation of my hand being in an empty space. The walls of the vagina neither touched me nor offered the slightest opposition. The walls at the sides were very thin and attached to the pelvic bones. Above, the vagina almost touched the sacral vertebræ, the rectum itself being on one side, the bladder as usual could be felt in its normal position. The internal portion of the vagina was smooth and seemed to be entirely devoid of the folds and ridges found in a healthy animal. On removing my hand, a loud noise, sounding like "bur-bur-bur" occurred; the lips of the vulva began to flap and air could be distinctly felt on placing the palm of the hand against the opening. Discharge of mucus was rather frequent and in large quantities, and a constant switching of the tail was a noticeable feature. I found further that the noise was produced without fail each time the animal urinated, or defæcated, or rolled, and even trotting and fright brought on this unpleasant noise. The mare was a real nuisance when driven in carriage, and every stroke of the whip, according to the owner's version, would unfailingly give rise to this disagreeable noise. With all my examination I was at a loss to understand the conditions and the entry of such a large amount of air. I suspected that owing to the increased calibre of the parts and want of tone in the same, air was sucked in the vagina and the same expelled when any kind of pressure was exerted on the same from the surrounding parts.

Further observation confirmed my suspicion as, in addition to the loud noise described above, I also remarked a peculiar whistling noise, which took place rather often, and this led me to conclude that the air was really being sucked into the vagina. During the suction the lips of the vulva remained passive and no discharge nor any movement of the parts could be seen. Later on this same air was expelled and the same characteristic noise, with its concomitant flapping of the lips of the vulva, was observed. The mare was rather weak but ate well, and was otherwise healthy.

The treatment that I followed was to a slight extent successful. Owing to the general debility and want of tone in the walls of the vagina, I gave daily a drench of the following drugs: Ext. ergot liq., Tinct. nuc. vom., Tinct. zingib.; locally Zinc sulph. solution was injected into the vagina. The discharge of mucus ceased in a few days, but the noise still kept on I continued the drench, sometimes giving it twice a day, and injected pure cold water, slightly coloured by Potass. permanganas. The mare appeared to grow better; as the noise occurred at longer intervals, I had the animal trotted, but no noise was produced. The mare now passes wind only at times, and that is mostly whilst urinating and defæcating.

Examination of the vagina to-day showed some diminution in its calibre, and the rectum was found immediately above and not on one side as before. The owner requested me to send the animal home for some private reasons and also to give any medicine and instructions to the groom if further treat ment was thought necessary, I have therefore discharged the case to-day, and gave some nervine tonic powder and instructed the syce to syringe the vagina once a day with pure cold water only. With the above treatment I have sanguine hopes that the mare will improve considerably, and possibly the question of perfect recovery only be a matter of time.

The case has interested me a great deal, as I never met with one before, nor have I seen it described as a separate disease in any of our text books. I wish to know if the increased calibre and want of tone in the walls of the vagina were really the causes of the suction and expulsion of such a large amount of air, and if the peculiar loud noise could be obviated by any mechanical means or surgical interference in case the administration of drugs failed to give the desired result.

[This vivid account of a case "not described in our text books" is interesting. The walls of the vagina—and in our experience of the uterus—seem to be paralysed, and air passes in and out from the action of the abdominal muscles and diaphragm. We have never seen recovery from such conditions.—Ed.]

Successful Conception and Gestation in a Red Heifer affected with Imperforate Hymen or Imperforate Vagina.

By Henry Thompson, M.R.C.V.S., Aspatria

Having now been in active country practice since 1852 I have during that time met with some interesting peculiarities in the generative organs of the domesticated animals of the farm, such as false membranes, tumours, bands, constrictions, torsion, etc., but never until a few days ago did I ever come across a case like the following.

On Saturday morning, Nov. 1st, I was called to a white cow which had been four days calved and was holding the cleansing and reported to be very sick and off her food. On arrival I found the patient in anything but a promising condition, and a filthy stinking placenta hanging from the vulva, the temperature was 105·6, breathing quick, an anxious face, and showing all the acute symptoms of parturient septic poisoning. I enquired into the history, and then removed the membranes, irrigating the womb with antiseptic agents and warm water. While thus occupied the owner remarked that he had a red heifer that wanted to calve but had no passage, and although she was in good fair condition she had been observed on several occasions during the summer to stick up her back and press and strain as if wanting to get rid of something.

After washing and thoroughly disinfecting my hands and arms, I examined the heifer, which showed all the characteristic symptoms of parturition, the pelvic bones, ligaments, aud vulva all relaxed, udder distended, teats pointed, and occasional strong labour pains. On examining per vaginam I met with a complete block about one inch internal to the meatus urinarius, the vaginal passage was entirely obliterated, exactly similar to what is met with in imperforate hymen, or the condition generally termed "white heifer complaint," a very common occurrence in my practice. I next examined per rectum and found under the floor of the bowel the head, fore feet and body of a fully developed calf close at hand in the pelvic bones, and alive. After a few minutes thought I resolved to attempt to break through the vaginal obstruction, and smearing my hand and arm with carbolic oil I commenced work, and first with one finger and then another, after a great deal of time and exercised patience (remarkable this) I eventually got through to the fœtus, and met with the remarkable fact that the os uteri was perfectly dilated. My son, who was with me, then passed a cord behind the back of the head of the calf under both ears, and also attached cords to both fore feet and jammed them into the passage, pulling steadily then relaxing and pressing the head back again, and so on, until the head was delivered, after which one fore leg and then the other was pulled forward, and finally a full grown well developed fœtus was got away, but unfortunately was dead. Strange to say there was little or no hæmorrhage. The cow laid for a time completely exhausted, but after a while pulled herself together, sat up on the breast bone and belly, and finally got on to her feet; she had several draughts of cold water offered to her which she drank and appeared to relish very much, the afterbirth came away normally about two hours later, the patient was very much swollen round the vulva and slightly off her food for a few days, I injected the vagina daily with 15 grain tablets of chinosol dissolved in one quart of tepid water (I find this grand treatment for lacerated vagina in both mare and cow). Three ounce doses of hyposulphite of soda, with the same quantity of mixed carminatives were administered in thin gruel twice daily for four days. The white cow had similar treatment, and both are now convalescent and doing well. I have operated on numerous cases of imperforate hymen or impervious vagina, but as already stated never met with a case before where fruitful conception and successful gestation had taken place, the case may possibly be of interest to some of the readers of *The Record*. I merely mention the case of the white cow retaining

the placenta as an instance of the very unfavourable conditions under which we country practitioners frequently find ourselves in regard to operations, and the great necessity of the free use of antiseptics.

YORKSHIRE VETERINARY MEDICAL SOCIETY.

A meeting was held at the Hotel Metropole, Leeds, on Friday, October 25th, when there was a large attendance of members and visitors. The President, Mr. J. McKinna, of Huddersfield, was in the chair, there were present Messrs. J. Abson, Sheffield; W. Ackroyd, Halifax; C. Aggio, Otley; James Bell, Brighouse; G. E. Bowman, H. G. Bowes, Ernest Child, W. Crawford, Dixon, A. McCarmick, A. W. Mason, Frank Somers, S. Wharam, Leeds; J. Clarkson, Garforth; J. Cooke, Scarborough; F. W. S. Clough, Morley; Chambers, Kirkheaton; J W. Carter, Keighley; A. Campbell, Boroughbridge; Phillip Deighton, Selby; H. Dyson, Huddersfield; A. Ellison, Harrogate; T. Fletcher, Sheffield; G. A. Green, Rotherham; J. Hodgman, Barnsley; Lloyd Jones, Doncaster; J. W. Lazenby, Tadcaster; J. W. H. Masheter, Huttons Ambo; H. Pollard, Wakefield; M. Robinson, Barnsley; S. E. Sampson, Sheffield; A. H. Watson, Thornbury, Bradford; George Whitehead, Batley; H. Walpole, Whixley; and Mr. J. S. Woodrow, Swinefleet.

The visitors included Messrs. R. E. Beilby, Dorking; W. H. Blackburn, Barnard Castle; W. Edmondson, Harrogate; James Furniss, Darlington; George Gordon, Pontefract; E. G. Johnson, Beighton, Sheffield; W. K. Lewis, Tarporley; James Marshall, Knutsford; Captain W. A. McDougall, York; W. Noar, Bury; W. B. Pearson, Chesterfield; E. H. Pratt, Northallerton; and J. W. Sanderson, Wetherby.

The Hon. Sec. (Mr. J. Clarkson) announced letters of apology from a number of gentlemen connected with kindred associations, veterinarians in practice in Yorkshire, and from the following members of the Yorkshire Society: Messrs. Foster, Lloyd, Pawlett, Pollock, Schofield, and Weston.

The minutes of the previous meeting were adopted.

Election of Officers.

Mr. Abson proposed that Mr. McKinna be reappointed President. He said he was quite sure all the members would agree with him that a better President than Mr. McKinna they could not possibly have.

Mr. Clarkson, as one who had worked with Mr. McKinna, said he had great pleasure in seconding the resolution. The past year has brought a considerable amount of work, and in one or two matters the President had exhibited great tact and resource. He could not help feeling that by accepting the office for another year Mr. McKinna would be conferring a benefit upon the Society.

The resolution was unanimously carried.

Mr. McKinna, in response, expressed his appreciation of again having been invited to fill the presidency, and remarked that until a short time previously he had no idea that a resolution in favour of his re-election had been contemplated. He had been going to thank the officers and the members for their kindness and assistance in making his year of office a pleasant one. His work had been very easy indeed; their excellent Secretary had done all the work, leaving him simply to preside over the meetings. He could not conceal from them the pleasure which he felt at the moment that they were not tired of his presidency, but that they had invited him to preside over them for another year.

Vice-Presidents.—Mr. Bowes moved that Messrs. Bowman, McCarmick, and Whitehead be vice-presidents, and the President seconded. The resolution was adopted.

Council.—Mr. Clarkson moved, Mr. Bowes seconded, and it was agreed, that Messrs. Ellison, Wharam, Frank Hallilay, Clough, Pawlett, and Barber be the Executive Council, of which the office-bearers are *ex-officio* members.

Hon. Treasurer.—Mr. Bowes was again chosen Hon. Treasurer on the motion of Mr. Wharam, seconded by Mr. Bowman, and supported by the President, the speakers commenting upon the efficient way in which he discharged his duties.

Hon. Sec.—The President, in moving the re-election of Mr. Clarkson to the secretaryship, said that he should like to have that gentleman by his side in an official capacity. Mr. Clarkson's excellent work on behalf of the Society was well-known to every member.

Mr. Abson seconded, remarking that it was a case of "leaving well alone."

Auditors.—Mr. Clarkson having thanked the meeting for their renewed confidence, proposed that Mr. Mason and Mr. Crawford be again appointed hon. auditors, and this was seconded by Mr. Whitehead and agreed to.

Nominations and Elections.

The following gentlemen were nominated for membership: Messrs. E. H. Pratt, Northallerton; H. Wood, Thirsk; James Furniss, Darlington; W. Collinson, Anston, Sheffield; E. G. Johnson, Beighton; and Edmondson, Harrogate.

On the resolution of Mr. Bowes, and seconded by Mr. Wharam, Mr. A. N. Foster, Sheffield; and Mr. J. W. H. Masheter, Huttons Ambo, were elected members.

Financial.

Mr. Bowes, as treasurer, presented his balance sheet for the year which showed a sum of over £23 in hand. He added, however, that since the preparation of the document there had been payments which brought the favourable balance up to more than £30.

The balance sheet was adopted, the resolution being moved by Mr. Wharam, and seconded by Mr. Mason.

The Hunting Testimonial.

The President said the Council had considered Mr. J. Malcolm's letter *re* the Hunting Testimonial, and had unanimously decided to recommend the Society to subscribe. As a Society, they were greatly indebted to Mr. Hunting for many papers from which they had benefitted.

Mr. Mason, without comment, moved that a subscription of £5 5s. be given.

Mr. Clarkson seconded, agreeing with the President that they were very much indebted to Mr. Hunting for the papers—always helpful and instructive—which he had given them. He had in many ways been a good friend to them.

Mr. Bowes, in supporting, said that they had had no better friend than Mr. Hunting.

The President, adding a few more words, expressed the conviction that the resolution would meet with the hearty approval of the meeting. He also explained that the Society's subscription would not prevent members from subscribing individually to the Testimonial Fund.

The resolution was carried with acclamation.

THE DIAGNOSIS OF ANTHRAX.

By Sir John M'Fadyean.

Sir John M'Fadyean gave a lantern demonstration in illustration of points connected with the diagnosis of anthrax.

He said that, in his opinion, the habit of diagnosing anthrax whenever there was evidence of rapid putrefac-

tion in the carcase of an animal which had unexpectedly been found dead was certain to lead to more than 50 per cent. of errors.

Dealing with the question of diagnosis during life, he said it ought to be better known than it appeared to be, that it was practically useless to search the blood for anthrax bacilli, except when the animal was at the point of death. After death, in cases of anthrax in cattle and sheep, the bacilli were found in large numbers in the blood throughout the whole body, but in the pig the bacilli were frequently absent from the blood, or present in such small numbers as to make a microscopic search for them unreliable. In these cases, however, when there was a throat lesion, the bacilli could be found there, and especially in the engorged pharnygeal lymphatic glands. In the horse, also, the bacilli were frequently not to be found in the blood by microscropic examination.

Sir John then went on to deal with the effect of putrefaction on the bacilli in the blood, and described minutely the morphological characters of anthrax bacilli, and the best methods of differentiating them by staining. Numerous specimens were shown to illustrate the methylene-blue reaction of anthrax blood, and to prove that the reaction was one which was quite appreciable to the naked eye.

Discussion.

Mr. Lewis, a visitor, rose and said that he should like to thank Sir John M'Fadyean for his very valuable and instructive address, and also the Society for their kindness in allowing him and other visitors the great privilege of being present. This was the first time that he had attended any meeting of the Society, but he hoped it would not be the last. He had been very much impressed with what he had seen and heard, and one statement which had been made was news to him. He hoped that Sir John would be long spared to give them the benefit of his great experience. He asked what sort of a microscope should an ordinary practitioner have, remarking that he had found it very difficult to find the bacilli after thirty hours' death.

Sir John M'Fadyean recommended a 12-inch oil immersion objective.

The President said that personally he felt greatly indebted to Sir John, who was such a busy man, for his kindness in coming down from London to Yorkshire to give them such an extremely instructive address on a subject which specially appealed to them. The address was admirably illustrated by the numerous slides thrown on the screen.

Mr. Fletcher remarked that the address had special value from the authorative manner in which Sir John was able to speak.

Mr. E. G. Johnson spoke of the enjoyment he had received from listening to the lecture, and said it was evident that he had missed a good deal by not having been a member of the Society. He had read that the anthrax bacilli could not be detected in the blood of a human being. He should like to know whether the bacilli could or could not be found in the human blood. In regard to the differences of opinion that were sometimes met with, Mr. Johnson said that in a case to which he was called, a fellow practitioner thought that death was due to lightning, whereas his view was that it resulted from anthrax. As he was the inspector of the area, he felt that his position was a delicate one. He took one ear, and gave the other ear to his *confrère*. Later, after a diagnosis at the University, it was reported that anthrax was the cause of death. The important point of the case was that the spleen was not enlarged. There ought to be some means by which they could diagnose anthrax.

Mr. Clarkson remarked that one night, a fortnight ago, he was called to see a couple of pigs, which he was convinced were suffering from anthrax. He reported the cases to the Local Authority. At dinner time the pigs were well and had a good feed, but when he saw them there was some swelling in the throat, and heavy chest breathing. Next morning he went prepared to examine the pigs for anthrax, but they were much better and recovered.

Mr. Bowes mentioned that some years ago he had several cases of young horses which died, death on microscopic examination being proved to be anthrax. The principal lesions were hydro-thorax.

Mr. Carter asked Sir John to express some opinion as to the time at which, owing to putrefactive changes, diagnosis became difficult.

Mr. Dixon also wished to know if any diagnostic value should be attached to ecchymosis and what proportion of methylene blue was right.

Sir John M'Fadyean, in reply to the discussion, said he thought it was Mr. Lewis who had revived the interesting question as to what was the diagnostic value of the swelling of the spleen. He understood that Mr. Lewis was disposed to go further than he would in saying that if it were permissible to see the spleen one could make his diagnosis without any chance of error. He was unable to agree. When blood was fresh the naked eye was pretty reliable for the scrutiny of the proportion which had been stained with methylene blue. If he were pressed as to what sort of a microscope a veterinary surgeon should have, then he would say that he should not get anything of lower power than a 12-inch oil immersion lens. Another question addressed to him during the discussion was what he thought should be done in a case where a farmer slaughtered a cow to save, so to speak, his life, and the veterinary surgeon saw the carcase afterwards. He should like to follow the Scotch style of answering the question by asking another. What did the farmer want to know? Did he want the authority or the sanction of his veterinary surgeon to send the carcase to the slaughter-house? It was a culpable thing, verging on the criminal, for a veterinary surgeon to certify that the carcase of a cow, which had been killed because it was going to die, was fit for human food. There was always suspicion when an animal had to be killed to save its life. A suspicion of anthrax under the law was created, and the only way of removing it was a microscopic examination of the blood.

In reply to Mr. Johnson, he explained that he had not observed that bacilli were never to be found in large numbers in pig's blood. What he did say was, that in a large number of cases, and in the majority of cases, the bacilli were not found in such quantities as to be detected by the microscope. He was asked by Mr. Johnson a question with regard to the lightning case. The same answer would apply as to the inquiry respecting the animal slaughtered to save its life. As he understood, Mr. Johnson believed that the spleen was frequently normal in the case of anthrax. All he could say was that it was entirely opposite to his experience. His opinion was the common one

Mr. Johnson: I used to be of the same opinion.

Sir John M'Fadyean: Perhaps I shall come to your opinion with a larger experience. (Laughter.) We must, I think, agree to differ. My opinion is that there is not one case of anthrax in a thousand with a normal spleen. Anthrax in the pig is by no means fatal, and the cases described by Mr. Clarkson might have been cases of anthrax. He had had no experience like that of Mr. Bowes. No precise answer could be given to Mr. Carter's question. It depended almost entirely on the temperature. Mr. Dixon asked what importance should be attached to ecchymoses in slaughtered cases. His answer would be that very little importance should be attached. He was perfectly satisfied that there were many cases of anthrax where ecchymosis was absent.

The PRESIDENT then embodied the individual expressions of thanks to Sir John M'Fadyean in a resolution, and it was carried with acclamation.

Sir JOHN M'FADYEAN, in acknowledging the vote, said it had been a great pleasure to him to come to Leeds and meet the members of the Yorkshire Veterinary Medical Society. If they reckoned it any advantage that he should be there to speak about anthrax, the thanks were due to their President, who, he would not say insisted upon his coming to Leeds, but he displayed all the pertinacity which was supposed to be characteristic of his country. (App.)

Afterwards those present at the meeting were entertained to tea at the hotel by the Leeds members.

REPORTS OF THE ROYAL COMMISSION ON HUMAN AND ANIMAL TUBERCULOSIS.

Dr. L. COBBETTS's report on the "Pathogenic Effects of Human Viruses" forms the second of the volumes recording the work done by different members of the scientific staff of the Royal Commission at the farms and laboratories at Stanstead. Dr. Cobbett almost from the beginning had charge, under the direction of the Commission, of the experimental work done at the Blythwood farm with viruses of human origin. The principal object of this work was to investigate the pathogenic effects on various species of animals of tubercle bacilli obtained from cases representing so far as possible all the different clinical varieties of tuberculous disease in both adults and children, and especially to find out whether some viruses of human origin were more or less virulent than others for the bovine animal.

In all 63 different viruses were used. Most of the material was obtained at post-mortem examinations, but some of the material, especially that from glands and joints, was obtained from operations on patients. Sputum from pulmonary tuberculosis was employed in four cases, and lesions of the lung in cases of apparently primary pulmonary tuberculosis in ten others. The material in each instance was used to make an emulsion, which was either injected directly into different experimental animals or into guinea-pigs from which cultures were afterwards obtained and utilised for inoculation. Sometimes both methods were employed.

When tuberculous lesions were obtained from experimental animals thus inoculated, further tests were made to determine the virulence of the particular "strain" of the virus which had been obtained by using emulsions or cultures derived from those lesions, for additional experiments on animals of different species. The means adopted to estimate the number of tubercle bacilli introduced in each inoculation have already been referred to in the previous article of this series. The culture medium employed was solidified serum. The species of animals on which the virulence of the different viruses was tested included the ox, goat, pig, dog, monkey, rabbit, guinea-pig, and rat. Some experiments were also made on the cat, mouse, and fowl, and two each on the chimpanzee and baboon. So far as possible the experiments were arranged in groups with a view to eliminate differences due to the dose, the mode of administration, and the age of the animal. Dr. Cobbett notes that the variation of individual susceptibility in calves was found to be considerable, and to avoid errors due to this source calves were as a rule injected in pairs and in important cases larger numbers were used.

Classification of human viruses.—The result of the injections, taken as a whole, was to differentiate the several viruses obtained from man very sharply into two classes. This division is effected by taking the results of inoculations on the ox species and on the rabbit. In Group I. suitable doses, such as 50 milligrammes of culture, produced rapidly fatal general tuberculosis when injected subcutaneously into the calf, while the same viruses were highly virulent for the rabbit in which they rapidly caused fatal tuberculosis. In brief, viruses belonging to Group I., as regards virulence to bovine animals and rabbits, behaved essentially in the same way as corresponding viruses obtained from the cases of naturally occurring bovine tuberculosis, the virulence of which was independently studied at the Walpole farm. It will be remembered that the Royal Commission in discussing in its second report the correspondence between the viruses of this "Group I." and those of bovine tuberculosis, was also able to indicate a like similarity in the histological and cultural characters of the bacilli concerned, which were of the "dysgonic" type, growing with least luxuriance on glycerine serum and certain other media, and contrasting, as a whole, with the "eugonic" bacilli of Group II.

Viruses of Group II., inoculated into calves in doses such as 50 milligrammes of culture and sometimes in far larger quantities, produced no more than a transient disturbance of health and localised or minimal lesions which soon become retrogresssive. They had also a low degree of virulence for the rabbit and very rarely caused progressive or fatal tuberculosis in that animal. "Almost without exception," Dr. Cobbett states, "our strains of tubercle bacilli have fallen into one or other of these classes."

Virulence of human bacilli for the ox species.—Although the production of generalised tuberculosis in the calf and adult bovine animal was characteristic of all the viruses of Group I., Dr. Cobbett emphasises the inability of small doses to effect this result. The dose necessary is larger than can be supposed to be usual in the case of infection of the bovine animal under natural conditions and this circumstance suggests that when bovine animals are exposed to infection under such conditions severe and progressive tuberculosis may only result exceptionally, as a result of some special susceptibility of the animal concerned. With regard to viruses of Group II., Dr. Cobbett found that their failure to cause progressive or fatal tuberculosis in the calf was maintained, even when a dose as great as 10,000,000,000 bacilli in a tissue emulsion, or as much as three grammes of culture, was employed for subcutaneous inoculation. Intravenous injection of suitable doses produced a fatal result in consequence of extensive consolidation of the lungs caused by the confluence of little infiltrated and œdematous areas which arose round each collection of tubercle bacilli lodged there, but if these were not so numerous as to leave insufficient lung tissue to support life the tubercles underwent retrogression and the animals recovered. After subcutaneous injection the bacilli of Group II., like those of Group I., became widely and rapidly distributed all over the body; the difference between the two groups is the incapability of the former to cause progressive disease. The viruses of this Group II. did not appreciably differ in virulence among themselves. A few of the calves inoculated developed a large number of tuberculous lesions in their glands or organs, but these were not progressive, and other animals injected with the same viruses developed only minimal lesions.

Virulence for Rabbits.—The usual practice in this case was intraperitoneal injection. When viruses of Group I were used a moderate dose of culture (1 or 0·1 milligramme) produced tuberculosis, which was invariably fatal within a few weeks and sometimes in less than a fortnight; even in smaller doses (down to a millionth of a milligramme) a fatal result was obtained, though after a longer interval. With viruses of Group II. moderate doses produced tuberculous lesions, often numerous and widely distributed. But the animals remained well and grew large and fat. "The difference is very striking to those who see one lot invariably die and the

other, as a rule, live to be large, well-grown and fat animals."

Virulence for other species.—The facts as to each species are set out at length in the report. The goat and pig, like the ox and rabbit, were highly susceptible to the attack of tubercle bacilli belonging to Group I., and were able to overcome infection with bacilli of Group II. The few experiments on the cat showed that it might be infected by feeding with bacilli of Group I, while it was extremely resistant to bacilli of Group II. The chimpanzee, monkey, and guinea-pig proved highly susceptible to infection set up by bacilli of either kind. Rats could only be affected by bacilli of either group when these were administered in enormous doses. When rats succumbed to tuberculosis the fatal result appeared to depend upon the enormous multiplication of the bacilli which gradually took place in the tissues, accompanied by very little tissue reaction or new formation. Organs which were swarming with tubercle bacilli appeared normal to the naked eye, or merely swollen and congested. Dr. Cobbett infers that while the tubercle bacillus can multiply freely in the tissues of the rat that animal is insusceptible to the toxins of the bacillus.

"*Passage Experiments.*"—One of the most interesting portions of the Royal Commission's second report was that in which are described the results of passing certain viruses of Group II. through a series of calves in succession, and thereby obtaining emulsions from the organs of the later animals in the series which gave reactions characteristic of the bovine virus, or Group I. These emulsions caused fatal progressive tuberculosis in calves and rabbits, while the bacilli, from being of the "eugonic" type, had acquired morphological and cultural characters which placed them in the "dysgonic" class. The publication of this report enables the whole of the animal experiments with the viruses in question to be followed in detail.

Human tuberculosis of bovine type.—In order to show the origin of the human tuberculous material which furnished the viruses which were found to belong to Group I., and to correspond to the "bovine" type, we may here summarise a table give in the Commission's second report, which was based upon the results obtained with 60 out of the 63 viruses dealt with by Dr. Cobbett.

Nature of Case.	Number of cases.	Part used for experiment.	Virulence for bovines and rabbits.			
			Virulent (Group I.)	Slightly virulent. (Group II).	Irregular virulence.	Slight virulence at first, afterwards virulent.
Cases with tuberculous sputum.	4	Sputum.	1	2	—	1
Primary pulmonary tuberculosis.	10	Lung.	—	10	—	—
General tuberculosis.	1	Bronchial glands.	—	1	—	—
Bronchial gland tuberculosis.	4	Bronchial glands.	—	2	—	2
Cervical gland tuberculosis.	9	Cervical glands.	3	6	—	—
Primary abdominal tuberculosis.	19	Mesenteric glands and other tissues.	10	8	9	—
Joint tuberculosis.	10	Scrapings from joints, &c.	—	9	—	1
Tuberculosis of testicle and kidney.	2	Testicle, kidney.	—	2	—	—
Lupus.	1	—	—	—	1	—

The virus from the single case of lupus employed possessed a high degree of virulence to the rabbit scarcely inferior to that possessed by viruses belonging to Group I, and a low degree of virulence for the calf, only slightly greater than that possessed by viruses of Group II. It did not seem possible to regard this virus as intermediate between the two groups, but rather as belonging to a special class of its own.—*The Lancet.*

SYNTHETIC CAMPHOR.

Little more than twelve months ago no precise information could be obtained with regard to the production of synthetic camphor. Within the past few weeks, however, proof has been forthcoming that artificial camphor is now a reality, and we understand that both British and Continental firms are engaged in its production The making of synthetic camphor has been a problem which has engaged the attention of chemists all over the world for many years, and its final solution is by no means the least achievement of modern science. The firms referred to preserve the strictest secrecy with regard to the processes employed by them, and some of them have not actually placed the product on the open market. All the artificial camphor turned out by certain makers has up to the present been utilised in their own works as a substitute for the natural product, but, as will be seen on reference to a trade note in this issue, one London firm, at least, is in a position to quote prices.

The ketone, camphor, the secondary alcohol, borneol, and the hydrocarbons, camphene and pinene, are intimately related, and most of the syntheses of camphor consist in the oxidation of synthetic borneol. There are at least four methods for producing synthetic camphor, and in all turpentine oil—or, strictly speaking, pinene, which forms 70 per cent. of the bulk of turpentine oil—is the starting point. The obstacles in the way at present are of an engineering rather than of a chemical nature, and the manufacture may for a time be further impeded by the present price of the starting material—*i.e.*, turpentine oil—for the price of this has doubled in six years. It is only a question of time, therefore, before synthetic camphor may paralyse the industry in the natural product, if it does not annihilate it altogether, so far as its use on an industrial scale is concerned.

The synthetic is identical with the natural product in chemical structure and in chemical properties, but not in the matter of optical activity, the natural product being dextro-, while the manufactured article is lævorotatory. But this point does not in the least influence the use of synthetic camphor in the manufacture of celluloid, where 90 per cent. of the world's supply of camphor is at present consumed. With regard to its use in pharmacy it is doubtful if that will be great, for some time, at all events. Judging from the samples we have already examined, we can readily believe that it may replace the natural product, as soon as the price will allow, but it may be considered that the odour is less fragrant than that of natural camphor. The odour certainly is camphoraceous, but a spirit or ointment made from the new product might appear pharmaceutically inferior. Apart from the odour, the samples which we have examined have been in the form of "flowers," indistinguishable by touch or appearance from natural camphor, and having the peculiar property, like the latter, of clinging tenaciously to glass surfaces. The synthetic camphor burns with the familiar, intensely smoky flame, and vapourises rapidly when the flame is blown out. We have not yet seen the compressed form, but understand that this is a more presentable article than the natural, being very translucent. The consumption of camphor in medicine, however, is comparatively slight, and has not a predominant influence on the market.—*Pharmaceutical Journal.*

MEDICAL ETHICS.

Extract from an Introductory Address at the Meath Hospital, by Dr. JAMES CRAIG, M.D.

Medical ethics are the rules or principles that should govern our professional conduct. Medical etiquette is the ceremonial to be observed in our relations with one another and with the public. The public have a mistaken notion that medical etiquette consists of some rules unintelligible to them which the medical profession has imposed on its members in order to safeguard their own selfish interests, but which are detrimental alike to the welfare and the pockets of the general public. This is by no means the case, as these rules have been formulated quite as much in the interest of the patient as for the benefit of the members of the medical profession. If these rules at times appear to be faulty, it is generally due to a false interpretation of them.

Permit me, however, first of all, to point out to you a few of the matters that are regarded as unethical in professional conduct and then I shall say something later on concerning etiquette. You will scarcely have been given time to add to your probably meagre wardrobe the silk hat and frock coat which, with a diploma, go to the making of a professional man, until you will be besieged with requests from the manufacturers of patent medicines and patent foods to give laudatory testimonials of their products for subsequent publication. All such appeals must be persistently ignored if you desire to run on ethical lines. As time goes on you will be filled with a burning desire to see your names in the daily papers as the authors of marvellous cures, or the performers of some wonderful operations. Whatever valuable discoveries you make are to be used for the advancement of knowledge in your profession, and may only be communicated to the medical societies or medical journals, where your results can be examined and intelligently criticized.

You must be no participator in any public laudation of your own professional achievements. The respect of your professional brethren is a subtile sentiment, won only by slow degrees, but extremely easily lost, and once damaged seldom if ever regained. To win this respect it is necessary for you to play an honourable part in the game of life, and one of the points upon which the opinion of the profession is most sensitive, and most readily turned in a practitioner's disfavour, is the semblance on his part of any coquetting with the bewitching siren of advertisement. You must endeavour not to obtain practice by any unworthy means—no success, no notoriety is worth the loss of the respect of your brethren in the profession.

Another pitfall which the unwary practitioner must diligently avoid is the giving of professional assistance to unqualified persons—particularly unqualified dentists. It is not permissible for a practitioner to give his professional services to any society or combination of individuals, unless the entire sum of money paid by the members for the purpose of securing medical attendance for themselves and their families finds its way into the coffers of the practitioner.

I have already alluded to the depravity of underselling, particularly where a principle is involved, and the instance I have related should require no further elaboration.

It is not desirable for a practitioner to erect a notice board outside his residence on which is set forth the small value which he places upon his medical skill. It may be that he estimates his services at a shilling or even at half a crown a visit, but it is unbecoming to tell as much to the passer-by.

A leaning towards any form of quackery is certain to place the practitioner immediately without the pale of decent medical society, and where it is openly practised leads at once to ostracism and removal of the practitioner's name from the Register of the General Medical Council.

Although I have not by any means exhausted the ethical rules which help to regulate professional conduct, I must now pass on to the subject of medical etiquette. First of all it may, perhaps, clear the air of any misapprehension if I state quite clearly that no individual member of the public is to be regarded as the absolute property of any medical man. The public must be permitted to have a free choice in the selection of a medical attendant, but whether they are wise to be chopping and changing their attendant is quite another matter. During the progress of any specific illness if a patient sees fit to change his medical adviser, the medical profession expect that an intimation will be given by the patient to the practitioner in attendance that his services are no longer required. This is to prevent possible misunderstandings from arising between medical men, and to ensure that the patient will not be subjected to the advice and treatment of different medical advisers at one and the same time.

In a case of emergency where a practitioner is called upon to see a patient in the absence of the regular medical attendant, the former should communicate the fact to the latter at the earliest possible moment, and he should not remain in attendance after the regular attendant is available; further, where for any reason a practitioner has been placed in charge of patients by a brother practitioner, he must exercise the most unceasing care neither to undermine the faith of the patients in their own absent attendant, nor afterwards himself undertake the treatment of such patients.

In the matter of consultations it is a practitioner's duty to accept with alacrity the earliest hint from a patient that a second opinion on his case would be gratifying either to himself or to his friends; but there are certain conditions in which it is imperative upon him to urge the necessity for further advice and assistance without waiting for a request from the patient or his friends. The Ethical Committee of the British Medical Association have formulated these cases as follows:—

(*a*) When a question arises of the propriety of performing an operation or adopting some course of treatment which may be dangerous to life or permanently injure the condition of the patient, especially if the condition which it is sought to relieve by this treatment be not itself dangerous to life.

(*b*) When a question arises of destruction of a fetus or unborn child in the interest of the mother.

(*c*) When the practitioner in attendance is definitely in doubt either as to the diagnosis or as to the treatment to be followed, and when delay in arriving at a decision might be fraught with serious consequences to the patient

(*d*) When there is evidence of serious doubt in the mind of the patient or his friends as to the correctness of a diagnosis or of the treatment pursued.

(*e*) When the attendant has reason to suspect:
- (i) Performance of any illegal operation.
- (ii) Administration of poison.
- (iii) Commission of any other criminal offence.

In regard to the choice of a consultant, it is generally expedient to follow the wish of the patient or his relatives; but if the case is one which demands special knowledge, it is the practitioner's duty to endeavour to secure the services of the consultant from whom he expects to derive the greatest assistance. The practitioner in attendance arranges for the consultation, and punctuality on the part of both advisers is so necessary that it is not incumbent on either to wait beyond a reasonable time. Failing punctuality, the consultant may see the

patient in the absence of the other. The regular attendant enters the patient's room first and leaves it last, and the opinion arrived at after consultation should be communicated to the patient in the presence of the regular attendant. If a difference of opinion exists between the two medical practitioners it is most desirable that it should be communicated to the patient or his friends, so that further advice may be obtained in the interest of the patient. The regular attendant should inform the patient or his friends as to the amount of fee to be paid to the consultant. Where a personal consultation is impossible the medical attendant should write a letter of information and introduction to the consultant, who in turn communicates his opinion and suggestions as to treatment to the medical attendant.

There are two most essential rules which it is the duty of the consultant to observe in the strictest manner. In the first place, he should exercise the most scrupulous care to avoid disturbing the confidence of the patient in his ordinary medical attendant; and in the second place he should not supersede the practitioner through whom he has received an introduction to the patient. —*B.M.J*

CONTAGIOUS DISEASES OF FARM ANIMALS, WITH SPECIAL REFERENCE TO GLANDERS AND ANTHRAX, by Prof. PENBERTHY.

(*Concluded from p. 334.*)

ANTHRAX.

Anthrax, otherwise known as splenic apoplexy, or splenic fever, was first brought within the operations of the Contagious Diseases (Animals) Act by issue of the Anthrax Order of 1886, and the first official returns were for 1887. Probably these facts have given rise to an impression, now very general, that anthrax is a disease new to this country. The disease has been described by very ancient writers. In fact, it is believed to be the disease referred to in Scripture, which broke out in "boils and blains" in man and beast. The earlier English writings, referring to diseases of cattle, describe some of its salient features, and particularly its communicability to man, and leave no room to doubt that anthrax has existed here from what is termed "time immemorial."

Though by inoculation very readily communicated to all farm animals, for some reason anthrax, under ordinary circumstances, is much more common in cattle. The returns for 1906 report a total of 1330 deaths of animals of all species. Of these, 999 were of cattle, 83 of sheep, 213 of swine, and 34 of horses. How far cases occurring in cattle, sheep, and horses depend on each other is not easy to ascertain, but it appears probable that animals of these several species do not usually acquire the disease directly from each other, but from the same or distinct sources. With swine the case is quite different, for though it is quite possible for pigs to become affected by taking the virus from an independent source, the great majority become infected by eating portions of the carcase, offal, blood, or discharges of animals dead of the malady. The total number of cases, and the numbers at single outbreaks, shown in the annual returns are considerably affected by figures against swine. On theoretical grounds most of these cases are avoidable. Anthrax is not limited to farm animals, as the majority of mammals are susceptible. Dogs and other flesh-eating animals may contract the disease in the same manner as swine. Rabbits, mice, sparrows, etc., are readily infected by inoculation. Occasionally deer become naturally infected, and in the returns for 1889 it is shown that 461 died of the disease. Anthrax gains its greatest importance from the fact that it is communicable and often fatal to man.

Although readily communicable by experimental inoculation, and truly a contagious disease, anthrax is not disposed to spread directly from diseased to healthy animals in a place by cohabitation, or from place to place. The danger is local, and if a carcase is not properly disposed of, anthrax spores may be formed and maintain the danger locally for some time to come. Very occasionally the disease may be transported from one place to another by dogs or other animals feeding off an affected carcase, and even by flies or fodder; but such spread is very rare.

The total economic loss from anthrax must be regarded as small. In Great Britain there are 35,600,000 susceptible farm animals, and in no year up to the present time has a larger number than 1,589 deaths been recorded; and though to a man whose worldly possessions consist only of three acres and one cow, loss to the individual may be most serious, a national insurance of 3d. a score would cover all risks, at £15 a head for cattle, 50s. for sheep, £2 for swine, and £30 for horses.

The most striking feature in relation to anthrax at the present time is the increase in the number of outbreaks shown by the annual returns of the Board of Agriculture.

To some extent the figures for the past twenty years may represent an apparent increase which is not altogether real. General diffusion of more precise knowledge concerning the disease and the law relating to it, compulsory notification enforced by the Anthrax Order of 1899, and consequently more consistent reporting of cases, have possibly had some effect in bringing to light cases which formerly were not reported, but against this must be placed the effect of more delicate and certain methods adopted in diagnosis, which have excluded many reported cases which would have been accepted as anthrax twenty years ago. It is also within the range of possibility that the incidence of anthrax may be affected by meteorological conditions of temperature, rainfall, etc., or other temporarily obtaining circumstances, for a reduction of nearly 11 per cent. occurred between 1904 and 1906. It is beyond question that if the carcase of an animal dead of anthrax is opened, and the blood spilt under conditions favourable to the development of anthrax germs, these may give rise to cases at some future period. This is the manner in which the disease is kept up from year to year in some places. It has been regarded as the principal method by which anthrax is maintained in this country, and that the number of outbreaks mainly depend on anthrax bacilli from such sources. Much inquiry into the history of outbreaks indicates that a large proportion occur on farms on which there is no record of a case having occurred at any former time. It cannot be accepted that this is in every case correct, as cases of the disease may have occurred and not have been identified. However, the results of inquiry in this direction suggest that there are outside sources of infection. It has been long known that anthrax germs are imported in foreign wool, hair, etc., and cases of the malady in man and in animals have been traced to germs introduced in this way. Animals grazing on pastures affected by the effluent of woollen factories, etc., are known to be particularly liable. Indeed, anthrax bacilli have been found in mud of the banks of rivers into which such effluent flows. While, however, realising this as a source of anthrax, and one which has been in existence for many years, certain facts prevent us from accepting it as full explanation of the reported increase in outbreaks in cattle. If the increase were mainly dependent on any increase in the importation of foreign material for manufacturing purposes, why should Aberdeen stand highest in last year's return, with 114 outbreaks, as compared with 41 for the West Riding of Yorkshire, which is also exceeded

by Devonshire, with 42; or Wigtown, with 28, as compared with Nottinghamshire, with 7? The occurrence of "woolsorters' disease"—pulmonary anthrax of man—is proved to be due to inhaling spores from foreign wool. It is well known that workers in hide factories dealing with foreign hides, and dock labourers engaged in unloading them, contract the disease. Many cases of anthrax in man are undoubtedly due to imported germs.

The Report of the Chief Veterinary Officer of the Board of Agriculture for 1906 states that 71 per cent. of the confirmed cases of anthrax pointed to infection through feeding stuffs or manures. Personal experience in investigating outbreaks of anthrax has frequently afforded no other probable solution, that is to say, when failing to discover any other circumstance which pointed to its origin, it has been found that the affected animals had been fed on something which may have been imported as linseed or cotton cake, Indian meal, purchased hay, etc. Inasmuch as artificial food is so generally used, this evidence is not of the first order. It has on at least two occasions been proved to the satisfaction of British juries that foreign oats and a linseed cake contained anthrax germs, and were responsible for the death, in the former case of several horses, and in the latter of several cattle. In the countries in which some of these commodities are grown anthrax is known to be prevalent; some of them, as linseed, are ground crops, and very liable to contamination from soil. As to manures, many in manufacture and preparation are subjected to conditions fatal to anthrax, while others, from their nature, are not at all likely to contain germs. Raw bones and those which are made of some factory refuse may possibly sometimes be bearers of anthrax spores. It must be accepted that at least some portion of anthrax occurring in this country is introduced by feeding stuffs, and possibly by manures; but there is room for doubting whether these sources are sufficient to account for the whole of the increase of later years. If it were so, how can the following returns be accounted for? The figures give the outbreaks in each county in the respective years:—

	1888.	1899.	1906.
Oxfordshire	1	2	2
Lincolnshire	20	18	17
Derbyshire	2	2	4
Herefordshire	1	3	2

If 71 per cent. of outbreaks of anthrax be due to infection through feeding stuffs, it might be supposed that there could be traced some relation between the number of animals in the different areas, the amounts of feeding stuffs probably consumed, manures used, and the number of outbreaks. The four counties in the preceding table maintain about 541,000 cattle and 2,000,000 sheep. In the three years named, which are taken at random, the aggregate number of outbreaks is 74, while for the one year, 1906, 114 are returned for Aberdeenshire, with about 180,000 cattle and 230,000 sheep. The small number of sheep affected is also remarkable, for of the 25,000,000 in Great Britain, only 83 were reported affected. It is probable that the lesser individual value accounts for some deficiences in the reports.

I do not think there are any grounds for assuming that four times as much cake is used now as twenty years ago, though, had the Small Holdings Act been in operation during that period, the centres of infection might possibly have been quadrupled. The possibility of anthrax germs being conveyed from one place to another by home-grown fodder has occasionally been demonstrated. On the last occasion I had the honour of reading a paper to this Club it was under the presidency of the late Mr. Knapp-Fisher, who then very kindly referred to my connection with a very serious outbreak on an estate in Northamptonshire, where the losses had for several years been so great that the very rich land could not be let except by the landlord indemnifying the tenant from losses against anthrax. In ignorance of the possible consequences, the hay from the pasture on which the cases occurred was sold to another tenant some miles away, on whose farm anthrax had never been known to exist. Within a short period of the young cattle commencing to eat this hay several of them died of the malady. On my recommendation the hay was burnt, and Mr. Fisher stated on the occasion referred to that no more case occurred there.

The main fact concerning anthrax which affords the material for practical application is that it is caused by bacilli, which swarm in inconceivable myriads in the blood, where they can be found only a short time before death, and may be identified by microscopic examination, if this is carried out before putrefaction sets in. As this process begins later on the outside than internally, the blood of the ear is selected, a practice which is easy and safe, beeause little or no blood is spilled; and the part can be easily disinfected. If the carcase be buried, as the animal dies, without any shedding of blood, putrefaction kills all the bacilli; and when completeall danger from anthrax isgone. If by any means the bacilli become exposed to air, and the temperature is not below 60 degs. F., or above 110 degs. F., they may multiply. If the temperature is above 65 degs. F. and below 105 deg. F., germs or spores form inside the bacilli, but this does not occur unless the bacilli have free access to oxygen (air). Bacilli are easily destroyed, a temperature of 160 degs. F. being fatal in a short time. On the contrary, spores are very resistant; putrefaction does not destroy them, and under circumstances favourable to them in the dried state they live for years outside the animal body. They withstand a very high temperature of dry heat, 110 degs. F. above the boiling point being necessary to immediately kill them. In the moist state they are killed by five minutes' exposure at the boiling point (212 degs. F.). It will be seen that temperatures usually obtaining in Great Britain do not favour the development of spores. In fact, in the greater part of the year, on this account, spores do not form; but there is just the possibility of this occurring should the blood be exposed while the carcase is warm, or in the heat of summer. In dealing with anthrax the most important consideration is the prevention of spore formation. From the above facts it will be seen that if any suspected material to be used as food is subjected to boiling for five minutes all danger of its producing anthrax is averted. It is due to cooking that man sometimes escapes infection. It is known that carcases of cattle dead of anthrax have been consumed without any ill results. It has been mentioned elsewhere that drying in sunlight is detrimental to anthrax germs, and in this way, probably in many cases, further mischief is prevented even where anthrax blood is spilled.

The rate at which anthrax germs multiply in the blood is altogether beyond the power of human comprehension. It has been computed that one bacillus in forty-eight hours has multiplied a thousand million times. This may give some idea of the danger of spilling blood from an anthrax carcase. It also tells us that conditions favourable to life and development can rarely exist, or farm animals or farmers and their griefs would have been exterminated not long after Moses wrote his account of the disease.

The fact of anthrax being communicable to man lends importance to the disease, and higher incentive to apply measures for its prevention. Though occasionally someone employed in connection with an affected animal or carcase contracts the disease by inoculation, the majority of the cases occurring in Great Britain are traceable to foreign sources. It is perhaps nothing more than a coincidence, but during the past twenty years the reported cases in farm animals and in man have risen in number side by side. The following table is compiled from the Registrar-General's returns and those of the Board of Agriculture:—

Deaths in Man from Anthrax.	Outbreaks in Farm Animals.	Proportion Man to Animals.
1887 to 1890 = 34 ...	735 ...	1 to 31
1890 „ 1895 = 39 ...	2006 ...	1 „ 51
1895 „ 1900 = 76 ...	2582 ...	1 „ 34
1900 „ 1905 = 87 ...	4115 ...	1 „ 48

In cases of man and outbreaks in animals the numbers were a little more than doubled during the past fifteen years.

The prevention of anthrax is, of course, the cardinal consideration. The stockowner's protection of his own interests is closely associated with the performance of the duty imposed on him by the State to notify at the earliest opportunity his conviction or suspicion. In the present state of our knowledge the first case of anthrax in a place is an accident, usually due to circumstances beyond our control; subsequent cases, most frequently to neglect of precautionary measures at our disposal. It is natural to ask the question, How can one know when an animal is dead of anthrax? The answer is, that of his own knowledge the ordinary stockowner cannot tell that any animal dying suddenly did *not* die of anthrax. It is perfectly clear that he should suspect all such animals, give notice immediately to the nearest constable, and make provision for preventing access to and egress from the place in which the carcase is, and that it should not be touched. On the arrival of the inspector all the owner has to do is to render facilities and abstain from doing a few things, such as the removal of milk of a diseased cow from the place in which she is or has been, etc. The restrictions following confirmation of the existence of anthrax are not irksome. Where the provisions of the Anthrax Order are adopted promptly, the dangers from recurrence of anthrax as a result of the first case are remote. In cattle and sheep there are no distinctive or suggestive symptoms during life except a high temperature, which may exist several hours before death, but in almost every case illness is so short that the animal is found dead. Pigs usually have very much swollen necks, which cause loud breathing. Horses are affected in various ways, but there are no diagnostic symptoms. If it is practicable, the subjection of the constituents of the various cakes when in the moist or semi-liquid state to a temperature of 212 degs. F. for five minutes would remove all possible danger from this source. Indian and other meals containing anthrax spores in a dry state would require a much higher temperature to render them safe. The courts have held that anthrax germs are not marketable as feeding stuffs, and heavy damages have been awarded in two cases in the High Court where it appeared proved that they were sold with cake and oats.

Some portion of the cases of anthrax in farm animals is undoubtedly dependent on germs imported with wool, hair, and hides. It is the duty of the State to endeavour to avert this danger, which must materially aid in maintaining the disease in this country. Effluent from wool, hair, and skin factories should be rendered inert by some reliable process, as boiling, before being discharged, and other waste burnt or disinfected before removal.

As to the disposal of carcases, this remains with the authorities. Burial and cremation are both in vogue. Properly carried out, both are equally effectual, and up to this time I am unable to detect any difference as regards the recurrence of cases after using one or the other.

In cases where anthrax constantly recurs it may be advisable to inoculate with Pasteur's vaccine, but under conditions which usually obtain this procedure is not indicated.

DISEASES OF ANIMALS ACTS 1894 TO 1903. SUMMARY OF RETURNS.

Period.	Anthrax.		Foot-and-Mouth Disease.		Glanders (including Farcy)		Rabies. Cases Confirmed.		Sheep Scab.	Swine Fever.	
	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Out-breaks	Ani-mals.	Dogs.	Other	Out-breaks	Out-breaks.	Slaughtered *
GT. BRITAIN. Week ended Nov. 9	24	31			8	22			18	38	180
Corresponding week in 1906 ..	17	21			19	36			13	33	214
Corresponding week in 1905 ..	16	20			22	34			19	14	86
Corresponding week in 1904 ..	19	22			19	27			16	14	85
Total for 45 weeks, 1907	941	1264			739	1697			468	2139	10247
Corresponding period in 1906 ..	790	1130			951	1804			355	1027	5858
Corresponding period in 1905 ..	842	1153			1073	1838			744	706	3169
Corresponding period in 1904 ..	871	1322			1349	2357			1148	1099	5120
IRELAND. Week ended Nov 2	..	..	..	..	..	..	..	..	6	4	39
Corresponding Week in 1906 ..	..	..	..	..	..	..	..	..	5	2	..
Corresponding Week in 1905 ..	..	..	..	..	2	2	..	..	2	..	..
Corresponding Week in 1904 ..	..	..	..	..	.	..	..	..	4	..	72
Total for 44 weeks, 1907	3	5	..	..	5	9	..	..	212	139	2414
Corresponding period in 1906 ..	3	7	..	..	8	16	..	..	190	86	948
Corresponding period in 1905 ..	3	5	..	..	28	94	..	..	251	125	1403
Corresponding period in 1904 ..	3	3	..	..	10	31	..	..	392	296	4052

Board of Agriculture and Fisheries, Nov. 12, 1907.

Department of Agriculture and Technical Instruction for Ireland, (Veterinary Branch), Dublin, Nov. 7, 1907.

NOTE.—The figures for the Current Year are approximate only.

* As Diseased or Exposed to Infection

COMPARATIVE SUMMARY OF RETURNS—PARASITIC MANGE, IN IRELAND.

	1907	1906	1905	1904
Outbreaks in October	5	6	2	3
Ten months	72	78	157	148

Prosecutions under the V.S. Act.

Sidney Berry, of Orchard Lane, St. Augustine's, was summoned for an offence under section 17 of the Veterinary Surgeons Act 1881. Mr. H. R. Wansbrough prosecuted, and Mr. F. E. Metcalfe defended, pleading not guilty on behalf of his client. Mr. Wansbrough stated that he was prosecuting on the instructions of the Royal College of Veterinary Surgeons. Defendant's father, Mr. James Berry, was a veterinary surgeon, and died in 1904. Thereupon his name was in due course removed from the register. Defendant had since carried on business at a shoeing forge in Orchard Lane, and had had painted up the words, "S. Berry, F.R.S.," the letters being three inches in length; then came the words, "successor to the late James Berry," in letters two inches in length; and finally, "Veterinary Surgeon," in letters four inches in length. He did not know what F.R.S. meant. They alleged that defendant committed the offence of having painted on the boards words indicating that he was a veterinary surgeon.

Henry Albert Pippin said he was the informant, and on October 22nd, in consequence of instructions he visited defendant's place of business. Witness gave particulars as to the lettering on the board in question. Cross-examined: There was another board facing Denmark Street, bearing the words, "S. Berry, F.R.S., Gaunt's Lane Shoeing Forge." He could not say whether the letters F.R.S. stood for anything in the nature of qualifications of a veterinary surgeon.

Mr. Metcalfe, for the defence, said the father formerly carried on business in Orchard Lane, and the son had done what thousands of men had done, simply put in the words "successor to." The letters F.R.S. stood for "First Rate Shoers." (Laughter.) He understood that had been the case for ages.

The Chairman: The letters are used by a select body, the Royal Society.

Mr. Metcalfe said that if the board was objected to, defendant was perfectly willing to take it down. There was nothing, he submitted, to penalise his client for.

Defendant promised to obliterate the words "Veterinary Surgeon," and he was fined two guineas and three guineas costs.

Frank Berry, of Colston Street, was summoned for a similar offence.

Henry Alfred Pippin stated that at the entrance to the hauling way leading to the yard in which was the shoeing forge were folding doors. Only one part was visible, and on it was painted "Veterinary Sh." On the wall on the opposite side there was a large board visible from the road, bearing the words "Berry's Veterinary Shoeing Forge," also the letters "V. S." It was an old board.

Mr. Metcalfe, for the defence, said there was absolutely no evidence to show that his client had held himself up to be a veterinary surgeon. He was registered as an art shoeing smith. He purchased the business from the executors, and with it certain boards, which he altered, but the board in question, which was very dirty, he had nothing to do with, and he had nothing to do with the premises where it stood.

Defendant having given evidence, Mr. Metcalfe gave an undertaking that his client would have the words objected to painted out or the board removed. The case was then withdrawn, defendant to pay certain costs.—*Western Daily Press.*

"Carrion" Meat at Chesterfield.

Thomas Wright, butcher, of 61, Cowley Street, Derby, appeared before the Chesterfield Borough Police Court on November 7th to answer three separate summonses arising out of a set of circumstances which occupied the brief space of five minutes on the night of Saturday, the 26th October.

He was charged with exposing for sale in Chesterfield Market Place meat which was unfit for human food, with obstructing the nuisance inspector in the execution of his duty, and with using obscene language. The meat case was taken first.

Mr. John Middleton, Town Clerk, who prosecuted, stated that on the evening referred to 26 pieces of meat were seized by Inspector Wood and after being examined by the Medical Officer of Health were subsequently destroyed on a magistrate's order. It was, said Mr. Middleton, about as bad a case as had ever come to their notice in Chesterfield. To the most casual observer the meat was absolutely unwholesome—shockingly, horridly unwholesome.

Dr. H. Peck, Medical Officer of Health, said the meat was simply carrion. The animal had apparently suffered from some wasting disease. It was dropsical, soft, and flabby, and a sour smell arose from it. The appearance of the veins indicated that the beast had either been bled after death or while in a moribund condition. It was quite unfit to be used as food for man.

Mr. F. Pearson, veterinary inspector, said there was not a particle of fat about the meat, some of the portions of which fairly stank.

Mr. Moresby White, barrister, who defended, contended that the meat was quite free from disease, but admitted that it was not of a very high quality. A number of people had partaken of meat from the same animal, and had not suffered any inconvenience.

Edward Johnson, veterinary surgeon, of Beighton, said he examined the meat on the Sunday, and found no evidence of either disease or putrefaction. In fact he would have have had no hesitation in partaking of the meat himself.

A great deal was made by the defence of the fact that the meat was destroyed before Mr. Johnson could obtain a sample of it for purposes of analysis.

The defendant said he had been connected with Chesterfield Market for 18 years. His stall had, since the trouble arose, been taken from him by the authorities.

A Derby butcher, named Walker, said he sold the cow to Wright for 10gs.

A woman, named Mrs. Howe, said she, her husband, and four lodgers partook of 11s. worth of the meat which she bought from Wright, and found it good.—Several other witnesses told how they had partaken of the meat and suffered no ill effects.

After a hearing lasting about six hours, the Bench decided to convict, and fined Wright £15 and costs.

Mr. Moresby White gave notice of appeal, and the Court adjourned the two other cases against Wright for a week.

Mr. Moresby White: I am sure my client will be glad to go before another Bench of magistrates. I have not had justice at all. In fact it is an awful travesty of justice.—*Sheffield Daily Telegraph.*

From the annual report of the London Port Sanitary Medical Officer we learn that in July a steamship conveyed to Bremen ten rams which were rejected on the ground of disease and brought back to London. The Board of Agriculture would not permit their relanding dead or alive. It was suggested that they should be destroyed at sea and thrown overboard. Several voyages across the North Sea, however, restored them to health, and they were ultimately landed at Bremen.

THE HORSE.

We are reminded that Prof. Axe's encyclopædic work is approaching conclusion by the receipt from the Gresham Publishing Company of Part VIII. Like previous volumes this is well and copiously illustrated, and contains a greater variety of literary matter than perhaps any of the other parts.

It commences with a long chapter on Equine Locomotion, a most important subject that seldom gains sufficient attention. The next section is on Breeding, and we may say the author treats his subject exhaustively and well. Horse Training and Stables form the next two chapters, which are followed by a section of over twenty pages on the Examination of Horses as to Soundness. Then the Teeth have a chapter to themselves, and the volume ends with a very useful *résumé* of the law of Warranty.

We believe the next volume will complete the work.

The Royal Society and Tuberculosis.

At last week's meeting of the Council of the Royal Agricultural Society of England an interesting discussion took place on a resolution submitted by the Veterinary Committee to the effect that tuberculosis, when legislatively dealt with, should be under the control of the Board of Agriculture. The Council of the Royal Society has now recognised that the tuberculosis question has assumed quite a different aspect from the time when they advised their members to fatten tuberculous animals and sell them to the butcher. Indeed, one member even went so far as to say that "great interest" was now being taken in the subject, apparently ignorant of the fact that four Commissions—Royal and Departmental—as well as a House of Commons Committee have been closely dealing with the tuberculosis question during the last fifteen years. As a matter of fact, the Council of the Royal Society are alarmed at the idea of legislation being drafted by the Local Government Board on the lines of the recent circular issued by that Department, and which, as we read it, clearly indicates that the owner of a tuberculous animal will be held responsible if he sells it as food for man. So long as the responsibility, loss, and guilt fell upon the meat trader, the Royal Society and every other Agricultural body in Great Britain affected to believe it was a "butcher's trade risk or contingency," and declined to do anything. Now, when it is proposed to saddle the breeders and feeders of stock with the duty of stamping-out bovine tuberculosis, they cry out about "legislation of the most harassing description." The scales have fallen from their eyes and they see not only that such legislation is tyrannical, but also that "the local authorities who appeared to be faddists, were inclined to harass the agricultural interest in every possible way and in a most unnecessary manner." How marvellous! The language employed is virtually the same as meat traders have been using year in and year out any time these past twenty years, but, so far as the agriculturists of England were concerned, it fell upon deaf ears.

When years ago we pointed out that bovine tuberculosis was a national calamity, and should be dealt with from the Public Exchequer, both as regards stamping it out, and compensating individual owners, agricultural bodies were exceedingly lukewarm and indifferent about promoting legislation. To-day they are massing their forces as swiftly as they can in order that, when legislation is brought forward, they may be able in the House of Commons and House of Lords to mould the proposed law into such a shape (if possible) as will enable the Board of Agriculture to retain control of all live stock, and thus render nugatory the efforts of our traders to relieve themselves from the burden of an unjust stigma. The Board of Agriculture has done nothing in the matter of tuberculosis and has no intention of doing anything. On the other hand, urged on by the repeated protests of our traders, the Local Government Board has at last attempted to grapple with the subject in a direct and efficacious matter. In doing so it has of necessity assumed obligations that ought to have been discharged by the Board of Agriculture, but in any case it is doing a national duty in seeing that the living tuberculous animal is prevented from being sold either openly or covertly. In this direction it is gratifying to note how the agitation for a warranty is spreading rapidly. From the self-contained Isle of Man and gallant Wales it has reached Cheshire; in Lincolnshire and Yorkshire we believe the demand will be heard shortly, and in other counties preparations are being pushed ahead to secure it Our National Federation has formulated a definite policy for the guidance of its numerous affiliated branches, and it only remains for members of these societies to announce their attention to adhere loyally thereto, in order to bring the issue to a satisfactory, business-like settlement. We live in an age where legislation is only attained by being aggressive and turbulent; heretofore, our traders have been much too mild, and reasonable.—*Meat Trades' Journal.*

Researches on Koch's Bacillus in the air of rooms occupied by Tuberculous persons.

At the recent French Medical Congress, M. Le Noir and M. J. Camus made public their results on this subject. They took samples of air in hospital wards occupied by tuberculous patients, in most cases at 50 centimetres distance from the mouths of patients who coughed, and whose sputa contained bacilli, and in this way found Koch's bacillus in the air. The air was filtered in several ways, through cotton and through powdered sugar which was subsequently dissolved and injected into guinea pigs. The dust from 53,000 litres of air was collected and centrifugalised, the deposit being used for inoculations. The samples were taken from both sunny and confined places. In no case did any inoculated guinea-pig develop tuberculosis, and these experiments show the difficulty of tuberculous infection by inhalation, at least, in a hospital environment where the elementary conditions of hygiene are observed.—*The Lancet.*

The Treatment of Follicular Mange.

Monsieur J. Nicolas, by means of a hypodermic syringe armed with a fine needle, made daily injections of a two per cent. solution of carbolic acid into the thickness of the skin of a dog affected with follicular scabies. At the end of from four to six days the pustules had disappeared. By the eighth day the hair had commenced to regrow. This treatment gave the author surprising results. He also used tincture of iodine, but preferred the two per cent. carbolic solution.—*Journal de Médecine Vétérinaire et Zootechine*, Sept., 1907.

H. G.

The *Musical News* published the following answers received at a recent musical examination at Manchester: "Interval"—a short pause for refreshments. "Finale"—this word tells you it is a good piece." "Bow"—a fiddlestring, sometimes also applied to a young man. "Allegro moderato"—a famous Italian composer who wrote a large number of pieces. "Poco crescendo"—a little swell. "Presto"—turn over. "Loco"—quickly, derived from locomotjve. "Con due pedale"—with cold feet. "Staccato"—stick to the notes. One hopeful declared that "one of the instruments played in the orchestra is a hornet."

The Ophthalmic and Cutaneous Reaction to Tuberculin and Mallein.

Although mallein when introduced into the eye or on the skin of a glandered horse as tuberculin in the case of tuberculosis, the reaction is not sufficiently characteristic to be of practical use, that is, it is not so reliable as a hypodermic injection. The cutaneous tuberculin test failed on three tubercular dogs.

(*Vallée, Moussu, and others.*)

Crocodiles and Sleeping Sickness.

Prof. Koch, who has apparently now completed his local study of sleeping sickness, has been interviewed on his way home by a correspondent of the *Lokalanzeiger*. He related that he had spent his eighteen months in East Africa on one of the Sesse islands, in Lake Victoria Nyanza, with a sergeant of the German Army Medical Staff as his sole white companion. Throughout their stay there they had seen only three Europeans, two of them being medical men from Vienna, and a third an official of the German Government. Professor Koch had much to say about the special object of his journey, but the only novel point in his remarks concern the habits of the *Glossina palpalis*. He appears to have found reason to believe that its natural victim is the crocodile, and that something towards abolishing sleeping sickness might be done by destroying crocodiles or removing the bushes and undergrowths where they lurk on land. The *Glossina* gets between the plates covering the crocodile's skin, sucking the blood where the epidermis is comparatively thin.

The Classes in Parliament.

The General Election of 1906 was hailed on all sides as one of the most notable in recent history. The weekly-wage earning class—commonly but erroneously designated the "working classes"—has secured a proportion of representation which of itself would be remarkable, even if it were not held to presage much further developments on the same lines in the future—developments which are confidently anticipated by many students of politics The number of factory hands, navvies, and pitmen in the House of Commons is already considerable. In a few years it may probably be three times as great. Another change which the election has made affects the landowning interest. "Squiredom" has lost most of its oldest representatives, and now has to depend upon the House of Lords alone for the protection of its interests. At first sight it would seem that the representatives of the middle class have won a preponderating influence. Broadly considered, this is well. The leisured class is, as a class, necessarily frivolous and shallow; and the extremely wealthy must needs pay excessive regard to their own financial interests. On the other hand, the manual labourer is, and must always be, incapable of intelligently governing a nation; in addition, he who has nothing to lose is apt to be irresponsible. Neither the aristocrat nor his antitype can lay claim as a rule to practical experience of affairs. Between the two extremes stands the great body of our nation of shopkeepers—professional men and tradesmen who have had to use their brains in order to earn their living, who pay the largest proportionate share of rates and taxes, who have had a reasonably good education, and yet know something of the struggles of the poor.

Broadly, this is the class to which most members of the House of Commons now, quite properly, belong. But if the classification be carried into greater detail, and the middle class representation be analysed a little more closely, it may probably be found that at least one important section of the middle-class has small cause for satisfaction. The services have about one hundred representatives; the interests of the legal community should be well looked after by 100 barristers and 34 solicitors; 10 doctors should be able to do much for their profession; the farming, brewing, banking, scholastic, and stockbroking interests will all have ample opportunities for regulating legislation. The large employers of labour have little reason to fear the attacks of the Independent Labour party so long as the House of Commons contains 70 manufacturers and 60 merchants. But with all this "class" representation—and much of it is avowedly such—the shopkeeping class remains, as before the General Election, quite inadequately represented in the Legislature. Manufacturer and miner, barrister and bargee, landlord and labour member—none of these is likely to make the interests of retail traders his chief concern.

It is probably true that the shopkeeping portion of people is constantly becoming of less account, owing partly to recent developments of municipal trading, and partly to the increase of those large trading syndicates and corporations which so unfortunately accentuate the distinction between Capital and Labour; and if, as seems likely, communal trading is to expand indefinitely in all directions, the individual shopkeeper will soon be a rare bird indeed. But for the moment it is undoubtedly fair to state that the shopkeeping classes are much too scantily represented in the House of Commons in proportion to their numbers; and, as a direct consequence, tradesmen must expect to benefit by legislation only so far as they may happen to derive incidental advantages from the reforms demanded in the interests of some other class. They have no really representative organisation, and they find their influence lessened in consequence. In the stress of the expected conflict between Capital and Labour, the middle classes must stand for the cause of reasonable progress and intelligent reform; and those members of the shopkeeping class who feel that it is to the interests of the country that they should retain their independent citizenship and remain their own masters, must seize every opportunity, outside the House of Commons as well as within, to make their own influence a living force, and to make a firm stand against the further growth of a system under which retail trade tends to become an oligarchy, and individualism is threatened with speedy extinction.

The French Minister of Agriculture evidently sees the utility of veterinary societies in their relation to agriculture as only the other day he accorded the "Société de Médecine Vétérinaire Pratique" a subvention of 1000f. (£40.)

Peterborough Bridge Fair, which dates from the time of Henry VI., was proclaimed on Tuesday, Oct. 1, and afterwards the Mayor gave a sausage luncheon, in accordance with ancient custom. The fair is supposed to inaugurate the pork season; hence the presence of sausages at the luncheon.

Personal.

General GUISEPPE MIRRI, who recently died at Bologna, was the possessor of a veterinary diploma. He had served under Garibaldi and performed at Volturno in 1860 some courageous acts. He was afterwards successively deputy, senator and Minister of War.

Professor A. OSTERTAG, of the High Veterinary School of Berlin, and the leading authority on meat inspection, has been nominated a member of the Imperial Office of Hygiene and Director of the Veterinary Section. This confers upon him the title of Privy Councillor.

MONUMENT TO PROFESSOR THOMASSEN. A committee has recently been formed with the object of erecting a monument in the Utrecht Veterinary School to the memory of Professor Thomassen.

Cape Town, Oct. 22, 1907.

NOTICE.—The following extract is taken from Cape Colonial Forces Order, No. 611, of Sept. 30, 1907 :—

Prince Alfred's Own Cape Field Artillery.—On completion of four years' commissioned service, Lieut and Veterinary Officer J. W. Crowhurst is granted the honorary rank of Captain, dated August 1, 1907. (Executive Council Minute, No. 2-2493, of Sept. 16, 1907).—*Cape Times.*

BIRTHDAY HONOURS.

Colonial Office List.—The King has been pleased to give directions for the following promotions and appointments of the Most Distinguished Order of Saint Michael and Saint George. . . .

C.M.G. Dr. ARNOLD THEILER, Government Veterinary Bacteriologist, Transvaal.

CORRESPONDENCE.

THE DOSE OF NUX VOMICA AND STRYCHNINE FOR THE DOG.

Sir,

During the last five years I have seen Strychnine and Nux Vomica used fairly extensively in canine practice. The extract of Nux Vomica has been that prepared by Parke, Davis and Co. For collies, retrievers, and the larger breeds ¼ grain of the extract given twice daily after food is well tolerated, but I have never continued it for more than four consecutive days. The larger terriers will stand 1/8th grain given in the same way. With toys, Yorkshires, spaniels etc. 1/8th given once daily for three days will frequently bring on toxic symptoms, alarming to the owner, but perfectly safe. As to strychnine sulphate 1/100 grain is tolerated for three or four days by toys, 1/60 gr. by larger terriers, and 1/50 gr. by the larger breeds of dogs.

I have not pushed the administration of this drug for more than a week except in the treatment of chorea, when in the form of Easton's syrup with gradually increasing dose a relatively large amount may be given.

GUY SUTTON.

Oxford Street, Nov. 14th.

MILK FEVER.

Sir,

Schmidt "chose to believe" what Mr. Thompson and others had vaguely theorised upon, and he applied it practically. The whole agricultural world is therefore greatly indebted to him, and his should be the honour as the inventor. Mr. Thompson and others having injected cows udders for mammitis and other maladies does not alter the fact that Schmidt was the first to publish the results of intramammary injection as a means of combating milk fever. Mr. Thompson's arguments as to the manner and amount of milk withdrawn do not convince me, as I have seen cows down and comatose within two hours of calving, and many others far gone in the morning which have given birth during the night and suffered no interference by the milkmaid. I have also seen every theory break down when tried in large herds, and where a sufficient number have been experimented upon. Milking before parturition, not milking at all, waiting a specified time, and taking particular quantities, indeed every sort of preventive treatment has come within my cognisance, and all proved fallacious. To Schmidt we owe more than to any other living veterinarian, in my opinion, and this need not diminish our admiration for others who have contributed to our present knowledge of the subject.

HAROLD LEENEY.

Sir,

Most people in the veterinary world have heard of Mr. Thompson of Aspatria, but I hardly think he will add to his reputation by his recent article in *The Record*. The extract from the colums of *The Field* seems to me a very fair statement of actual fact, It doesn't say that Schmidt was the *only* man that believed milk fever was associated with the udder. What it conveys is that Schmidt was the man who had the courage of his convictions and who applied his science. It is the application of science that counts in this world. Theories are good, but so long as they remain theories they belong only to the region of "beautiful, beautiful dreamland."

No doubt one man had a theory that heat would boil the water in a kettle, another man boiled the water and produced steam. A third man used the steam to drive a locomotive, but surely the theorist would not want to claim the credit due to George Stephenson.

No well informed man has asserted that injecting the udder is new. In mammitis this has been done for years with varying results. But injecting the udder for milk fever only dates from Schmidt, and that is the gist of the claim in *The Field*.

It is hardly fair yet to say that Chinosol or air are equal to Pot. iodide as an injection. Statistics, so far, or at any rate those I have seen, don't prove this. Personally, I have used Pot. iodide from the first and had no mishap,

Mr. Thompson's idea of external pressure to the udder as a means of treating milk fever may be all right as a theory, but most ordinary men have yet to learn how it can be practically applied. I think I could write something on this matter with a little research.—Yours truly,

G. MAYALL.

Sir,

The old adage "There is nothing new under the sun" seems well exemplified by an article on "Milk Fever" from the pen of Mr. Henry Thompson, of Aspatria, in the last number of *The Record*. From a careful perusal of it, I fancy he lays claim to be the originator of the udder theory in the causation, and the introducer of the intramammary treatment of the disease. He mentions "Castration" and "Diseases of the teats," but I cannot see what these have to do with it.

Mr. Thompson pertinently remarks: "The great secret is, if the functions of the udder could be maintained and the secretion of milk carried on we would have no milk fever." Quite true! But if? The rub comes in when we enquire into the cause of the "if." Perhaps Mr. Thompson has an easy solution of it. If so, I feel certain the profession will be deeply indebted to him. It would be a solution that could easily be applied to another great problem, viz., If we could only maintain the action of the heart we would have no deaths, but the world would have an overcrowded population of men and animals, fools and knackers.

Mr. Thompson considers another factor in the causation of the malady to be separation of the offspring immediately after birth from the cow. But I have no doubt he has logical reasons for this and perhaps will be able to reconcile his theory with the fact that cows are sometimes seized before calving, and even weeks or months after this act; and that it may appear like an epizootic, several animals on a farm or in a locallity being attacked about the same period.

From my jauntings into ancient history I find what appears to be Mr. Thompson's own, original theory, or rather assumption, is an old theory, older than Mr. Thompson himself. And what appears to be his treatment of udder diseases with a human indiarubber syringe, or any syringe, is at least 60 years old, and well known to a great number of practitioners, here and elsewhere.

Herr J. Schmidt, of Kolding, South Denmark, is unlike our original author; he has no theory of his own making, but prefers to adapt his practice according to his reasoning from the Schmidt-Mulheim theory, advanced more than 15 years before 1892. But if he had no theory of his own he has not only opened the way, but has made a permanent

causeway for others, all the world over, which now enables milk fever to be successfully treated, whereas all other treatments up to then were a signalised failure.

Herr Schmidt again, unlike Mr. Thompson, did not let his light shine under a bushel; he did more; he illumined the whole of the veterinary and agricultural world with his work. As soon as he had gained a certain amount of experience he, true to his nationality, first brought it before his Danish colleagues, and ultimately, after gaining more experience, before his German colleagues with a result that now nobody except Mr. Henry Thompson acclaims the Schmidt treatment as anything but the right thing to adopt in milk fever, and thus save agriculture an immense amount of money in the course of a few years.

SCRUTATOR.

ADVERTISING.

Sir,

A few weeks ago you kindly inserted in *The Veterinary Record* an extract from *The Bradford Daily Telegraph* which concerned Mr. F. Wainwright Anderton, F.R.C.V.S.

As Mr. Anderton admitted that he knew the author of the article referred to, but denied complicity in its publication, I naturally expected that similar articles eulogising Mr. Anderton's extraordinary skill would cease. However, since then his name has frequently appeared in the same paper, and I again send you another extract which, from the surgical, if not from the advertising point of view, I feel sure will interest many of your readers.—Yours truly,

"OBSERVER."

CANINE CHAT.

This week I have seen a remarkable "case" which has been successfully treated by Mr. F.W. Anderton, M.R.C.V.S. of Bradford. Some five or six weeks ago a valuable fox terrier, the property of Mr. Hack, of Chorley, Lancashire, sustained a compound comminuted fracture of the hind leg, which to the unitiated in surgery means both bones broken and practically pulverised. At first the "case" seemed hopeless, but under the skilful hands of Bradford's vet. a complete cure has been effected. Mr. Anderton procured another dog, and taking from it the corresponding bones effected a joint, and Mr. Hack's valuable animal has now full use of the member. There is only a very small swelling, and in the course of two or three weeks it is anticipated that all trace of the wound will be obliterated. The dog is in splendid health, and runs and jumps about with more than the usual freedom. Mr. Anderton indeed has good reason to be proud of such a feat of surgery, and all who see the dog will compliment him on his success.—*Bradford Daily Telegraph*.

NEW VETERINARY SURGEONS ACT.

Sir,

Being one of those interested in the above Act, which, if passed, will affect a large section of the community, I should like to ask one or two questions.

Why is no definition given of what constitutes "acting as a veterinary surgeon"? Does the Council fear that the bill will be rejected if its object is made too clear? What consideration is to be extended to the unqualified man? Nearly all these men have been manufactured by the M.R.C V.S. himself, to save his pocket the difference between the wage of the qualified and unqualified worker. If the M.R.C.V.S. will cease to train them, and will pay a fair wage to the young graduate, "quackery" will in a few years die a natural death.

I presume it is the intention of those responsible for the Act, as soon as it becomes law, to ask the Courts to decide that the operations of castration and spaying come within its terms. If so, what consideration is to be shown to the castrator? There are hundreds of that class in the country picking up a small and precarious living in the performance of this necessary work, some of them possessed by long practice of a very high degree of skill. Very many of the men on the Register are unable to spay a sow, cat, bitch, or heifer, and many who are able decline to do so. Who will undertabe that work after 1908?

What consideration will the farmer and stock-breeder receive? The farmer requires his castration done at reasonable fees, and no doubt the M.R.C.V.S. will be willing to do the colts, but who will do the calves, lambs, and pigs at the usual fees? The farmer is not compelled to employ the "quack," he is a free agent; he quite understands the difference between a qualified man and the unqualified, and he is able at present to please himself which he employs to castrate his animals. In some districts in which I have resided the M.R.C.V.S. has even refused to castrate colts. What is to be done for such districts?

Laws have always been made for the well-being of the general public and not for about 1186 (less than half of the qualified men on the Register) of any particular sect, and as this Act is likely to be detrimental to many thousands and absolute ruin to hundreds, we may with confidence look forward to its being "plucked" the first time of asking. There is no law to prevent a man from getting his living as a bonesetter or herbalist as long as he does not style himself a doctor. There is no law to prevent him from drawing up a man's will or an agreement so long as he does not call himself a solicitor. He may extract teeth and supply artificial ones in their place, but must not style himself a surgeon dentist; and as Parliament has never given the medical, legal, or dental profession the sole right, how, hardly, shall the veterinary profession expect to get it. The M.R.C.V.S. has his '81 Act wherein he is the recognised man in Court, his evidence alone is taken, he can sue for his fees, and he only is entitled to the term "veterinary" which places him on a level with other professions.

It is well known that this new Act is not for the good of the general public, but is intended to enable a jealous profession to prevent an outsider getting now and again a little out of doing certain work which frequently the M.R.C.V.S. cannot or will not do himself. I was never in any town yet where two veterinary surgeons were in practice and on friendly terms with each other. They have always been ready to cut each other's throat, and that being the case I suppose we must expect them to be jealous of the unqualified man (when they are not employing the latter to save their own pockets). One of your correspondents some time back suggested an Act to protect the qualified man from his qualified opponent, and no doubt that will be far better than Mr. Garnett's draft Bill.

I suppose if this Act passes the R.C.V.S. will try to get another passed to prevent the M.R.C.V.S. from running the businesses of shoeing-smith, cowkeeper and milkseller, coltbreaker, pig dealer, livery stable keeper and horse slaughterer. These are all useful "side lines" but hardly suitable for a learned profession. Perhaps, however, the Council intend later on to claim for the veterinary profession a monopoly of these useful but humble occupations also. I may say that I know a firm of qualified veterinary surgeons who, two or three years ago, ran all those branches to their practice, and their qualified assistants had to tramp to town every night after surgery hours to collect the coppers from the sale of the milk.

Unqualified opposition no doubt is strongest where the qualified is weak, and in that case the M.R.C.V.S. should not complain is he is not practical enough to snuff it out, because stockowners must have their stock properly attended, and will have it done whether it be from a qualified source or otherwise.

Thanking you in anticipation, I beg to enclose you my card and remain, yours faithfully,

WARWICK.

OPHTALMOLOGIE VETERINARIE ET COMPAREE, par le Dr. E. NICOLAS, Vet. en 1er de l'Armée. Cr. 8vo. 468 pp., 9 coloured plates and 165 illustrations in the text. Cloth, lettd. Asselin et Houzeau, Place de l'Ecole de Médecine, Paris. 1908. (Price not given).

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